

## SOFTY 2 Expander for 2764/27128 EPROMS

The expander is designed to accomodate the larger capacity EPROM's and provides a 28 pin ZIF socket with a rotary switch (2K) Bank selector. The socket plugs into the existing 24 pin ZIF socket on Softy 2.

There are two modes of use; READ, which allows the user to examine the contents on screen direct from the ZIF socket using PAGE 0-7, and to COPY the EPROM segment selected into Softy's 2k RAM. BURN. This mode enables the 2K RAM contents to be stored in the (blank) EPROM segment selected by the ROTARY SWITCH.

INSTALLATION. BEFORE ANY ATTEMPT TO 'BURN' IS MADE the Vpp voltage must be set to  $+21v \pm 1v$ . SOFTY normally generates  $+25v$ . This is arranged by DZ3 (20v) with VR1 (5v) in series with R16 supplying the Vpp PIN. To burn EPROM's Type 2732A, 2764 and 27128, DZ3 should be shunted by a 16v zener diode or combination to give  $V_{pp} = 21v$  during the burn cycle. A small SINGLE POLE slide switch can be easily fitted to make the selection trouble free in service. (Do NOT use this adaptor for 2732A devices - just modify the Softy Vpp to 21v.)

SOFTY SWITCH SETTING. BEFORE PLUGGING IN THE ADAPTOR-SET the coloured SWITCHES as follows - SW 1,4+5 to the RIGHT and SW 2+3 to the LEFT.

The Adaptor should be plugged into the ZIF socket with the 24 pin ZIF lever vertical (open position.) Align the lever on the adaptor over the lever of Softy's ZIF socket, insert the adaptor and close the lower lever.

Power up Softy and operate Reset command. With the 28 pin ZIF socket empty operate 'SHIFT' and the 'BURN'. Note that voltage at Pin 1 w.r.t. Pin 14 is  $21v \pm 1v$  d.c. during the BURN cycle and  $+5v$  d.c. on completion (after RESET). If the RAM contains only 'FF' hex. the BURN period will be very short. In which case SHIFT + COPY or SHIFT + FIRM will load the RAM with non - 'FF' hex. data.

When the above settings and checks have been performed it is safe to plug in the 2764 or 27128 ROM. Ensure that the screen is steady (Reset condition), - a flickering screen could mean a burn cycle and EPROM CORRUPTION!!

Select the segment 0-7 as follows:-

ROTARY SWITCH	START ADDRESS (all hex)	SOFTY PAGE start address (Data RAM AFTER 'COPY')								
	ZIF (PAGE 0)/RAM8	1/9	2/A	3/B	4/C	5/D	6/E	7/F	EPROM	
0 or 8	0000H	0100	0200	0300	0400	0500	0600	0700	2	27128
1 or 9	0800	0900	0A00	0B00	0C00	0D00	0E00	0F00	7	
2	1000	1100	1200	1300	1400	1500	1600	1700	6	
3	1800	1900	1A00	1B00	1C00	1D00	1E00	1F00	4	
4	2000	2100	2200	2300	2400	2500	2600	2700	/	
5	2800	2900	2A00	2B00	2C00	2D00	2E00	2F00	/	27128
6	3000	3100	3200	3300	3400	3500	3600	3700	/	
7	3800	3900	3A00	3B00	3C00	3D00	3E00	3F00	/	

Softy to Page 0-7 to view the ZIF contents.  
Softy to Page 8-F to view the RAM contents.

One page = 256 bytes (000H to 0FFH lower byte address.)  
One screen = 2 pages = 512 bytes (000H to 0FF) on each page.

2764	-27128	ZIF 28 Pin No
$V_{pp} = 21V$	$V_{pp} = 21V$	1
A12	A12	2
$\overline{CE}/V_p = 0V$	$CE/V_p = 0V$	20
$OE/V_p = 5V$	$OE/V_p = 5V$	22
A11	A11	23
N.C. (but used)	A13	26
$5V/V_p$	$5V/V_p$	27
Vcc	Vcc	28

The diagram illustrates the ZIF ADAPTOR system architecture and its data flow. It consists of the following components and connections:

- MASTER IN ZIF ADAPTOR:** A vertical stack of memory locations labeled 0, 2K, 4K, 6K, 8K, 10K, 12K, 14K, and 16K. An arrow labeled "27128" points to the 8K location.
- INITIAL RAM:** A 2K memory block. It receives data from the MASTER IN ZIF ADAPTOR via a "COPY" operation (indicated by dashed arrows from 2K, 4K, 6K, 8K, 10K, 12K, 14K, and 16K). It also sends data back to the MASTER IN ZIF ADAPTOR via a "REMOVE MASTER" operation (indicated by dashed arrows from the INITIAL RAM to the 0, 2K, 4K, 6K, 8K, 10K, 12K, 14K, and 16K locations).
- EDIT RAM:** A 2K memory block. It receives data from the INITIAL RAM via an "EDIT" operation (indicated by a dashed arrow).
- FINAL RAM:** A 2K memory block. It receives data from the EDIT RAM via a "BURN" operation (indicated by a solid arrow).
- Segment selector switch:** A vertical stack of memory locations labeled 0, 1, 2, 3, 4, 5, 6, and 7. It receives data from the FINAL RAM via a "BURN" operation (indicated by a solid arrow).
- Text:** "Repeat 8 times for 27128 for each 2K of code." is written at the bottom of the diagram.

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DATAMAN DESIGNS  
 LOMBARD HOUSE  
 DORCHESTER  
 DORSET  
 DT1 1RX

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Vpp = 21v	Vpp = 21v	1
A12	A12	2
CE/Vp = 0v	CE/Vp = 0v	20
OE/Vp = 5v	OE/Vp = 5v	22
A11	A11	23
N.C. (but used)	A13	26
5v/Vp	5v/Vp	27
Vcc	Vcc	28

Special Signal lines to Adaptor

Repeat 8 times for 27128  
 using segment selector  
 for each 2K of code.

Segment selector switch.

